

WHAT IS CLAIMED IS:

1. A method for fulfilling a search request generated from a
5 client computer to a search server, comprising:

instantiating a program on said client computer for
requesting and presenting a result of said search request;
transmitting information specifying said search request to
said search server;

downloading binary search result data from a database
within said search server to said client computer, said search
request result comprising location information and match quality
information;

interpreting said location information and match quality
information for display of said location information on a
graphical display of said client computer, whereby said location
information is formatted for presentation on said graphical
display by said program; and

generating said graphical display in conformity a result of
20 said interpreting.

2. The method of Claim 1, wherein said instantiating
instantiates a Java applet within a browser program executing
within said client computer, and wherein said interpreting is
performed by said Java applet on said binary search result data
5 and wherein said Java applet generates a graphical display in
conformity therewith.

3. The method of Claim 1, wherein said client computer is a
personal digital assistant (PDA), and wherein said instantiating
executes a dedicated application within said PDA and wherein
said interpreting is performed by said dedicated application on
said binary search result data and wherein said dedicated
application generates a graphical display in conformity with a
result of said interpreting.

4. The method of Claim 3, wherein said client computer is a personal digital assistant (PDA) and wherein said dedicated application further polls said search server for graphical information for generating said graphical display, wherein said interpreting is performed by said search server, said downloading downloads said graphical information along with said binary search result data, and wherein said dedicated application generates said graphical display in conformity with said downloaded graphical information and said binary search result data.

5. The method of Claim 1, wherein said generating generates a list of said location information and a control interface at each list item for manipulating said list item, and further comprising:

receiving a user input at said control interface for manipulating said list item; and
in response to said receiving, modifying a display of said list item in conformity with said user input without generating another request to said search server.

6. The method of Claim 5, wherein said list is a collapsible list, wherein each list item is representable by a verbose state and a sparse state, and wherein said modifying changes a state of said list item display in response to said receiving.

5

7. The method of Claim 1, wherein said generating generates a graphical mosaic comprising graphical figures each corresponding to a location, and wherein characteristics of said graphical figures are adjusted in conformity with said interpretation of said match quality information.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
3010
3011
3012
3013
3014
3015
3016
3017
3018
3019
3020
3021
3022
3023
3024
3025
3026
3027
3028
3029
3030
3031
3032
3033
3034
3035
3036
3037
3038
3039
3040
3041
3042
3043
3044
3045
3046
3047
3048
3049
3050
3051
3052
3053
3054
3055
3056
3057
3058
3059
3060
3061
3062
3063
3064
3065
3066
3067
3068
3069
3070
3071
3072
3073
3074
3075
3076
3077
3078
3079
3080
3081
3082
3083
3084
3085
3086
3087
3088
3089
3090
3091
3092
3093
3094
3095
3096
3097
3098
3099
30100
30101
30102
30103
30104
30105
30106
30107
30108
30109
30110
30111
30112
30113
30114
30115
30116
30117
30118
30119
30120
30121
30122
30123
30124
30125
30126
30127
30128
30129
30130
30131
30132
30133
30134
30135
30136
30137
30138
30139
30140
30141
30142
30143
30144
30145
30146
30147
30148
30149
30150
30151
30152
30153
30154
30155
30156
30157
30158
30159
30160
30161
30162
30163
30164
30165
30166
30167
30168
30169
30170
30171
30172
30173
30174
30175
30176
30177
30178
30179
30180
30181
30182
30183
30184
30185
30186
30187
30188
30189
30190
30191
30192
30193
30194
30195
30196
30197
30198
30199
30200
30201
30202
30203
30204
30205
30206
30207
30208
30209
30210
30211
30212
30213
30214
30215
30216
30217
30218
30219
30220
30221
30222
30223
30224
30225
30226
30227
30228
30229
30230
30231
30232
30233
30234
30235
30236
30237
30238
30239
30240
30241
30242
30243
30244
30245
30246
30247
30248
30249
30250
30251
30252
30253
30254
30255
30256
30257
30258
30259
30260
30261
30262
30263
30264
30265
30266
30267
30268
30269
30270
30271
30272
30273
30274
30275
30276
30277
30278
30279
30280
30281
30282
30283
30284
30285
30286
30287
30288
30289
30290
30291
30292
30293
30294
30295
30296
30297
30298
30299
30300
30301
30302
30303
30304
30305
30306
30307
30308
30309
30310
30311
30312
30313
30314
30315
30316
30317
30318
30319
30320
30321
30322
30323
30324
30325
30326
30327
30328
30329
30330
30331
30332
30333
30334
30335
30336
30337
30338
30339
30340
30341
30342
30343
30344
30345
30346
30347
30348
30349
30350
30351
30352
30353
30354
30355
30356
30357
30358
30359
30360
30361
30362
30363
30364
30365
30366
30367
30368
30369
30370
30371
30372
30373
30374
30375
30376
30377
30378
30379
30380
30381
30382
30383
30384
30385
30386
30387
30388
30389
30390
30391
30392
30393
30394
30395
30396
30397
30398
30399
30400
30401
30402
30403
30404
30405
30406
30407
30408
30409
30410
30411
30412
30413
30414
30415
30416
30417
30418
30419
30420
30421
30422
30423
30424
30425
30426
30427
30428
30429
30430
30431
30432
30433
30434
30435
30436
30437
30438
30439
30440
30441
30442
30443
30444
30445
30446
30447
30448
30449
30450
30451
30452
30453
30454
30455
30456
30457
30458
30459
30460
30461
30462
30463
30464
30465
30466
30467
30468
30469
30470
30471
30472
30473
30474
30475
30476
30477
30478
30479
30480
30481
30482
30483
30484
30485
30486
30487
30488
30489
30490
30491
30492
30493
30494
30495
30496
30497
30498
30499
30500
30501
30502
30503
30504
30505
30506
30507
30508
30509
30510
30511
30512
30513
30514
30515
30516
30517
30518
30519
30520
30521
30522
30523
30524
30525
30526
30527
30528
30529
30530
30531
30532
30533
30534
30535
30536
30537
30538
30539
30540
30541
30542
30543
30544
30545
30546
30547
30548
30549
30550
30551
30552
30553
30554
30555
30556
30557
30558
30559
30560
30561
30562
30563
30564
30565
30566
30567
30568
30569
30570
30571
30572
30573
30574
30575
30576
30577
30578
30579
30580
30581
30582
30583
30584
30585
30586
30587
30588
30589
30590
30591
30592
30593
30594
30595
30596
30597
30598
30599
30600
30601
30602
30603
30604
30605
30606
30607
30608
30609
30610
30611
30612
30613
30614
30615
30616
30617
30618
30619
30620
30621
30622
30623
30624
30625
30626
30627
30628
30629
30630
30631
30632
30633
30634
30635
30636
30637
30638
30639
30640
30641
30642
30643
30644
30645
30646
30647
30648
30649
30650
30651
30652
30653
30654
30655
30656
30657
30658
30659
30660
30661
30662
30663
30664
30665
30666
30667
30668
30669
30670
30671
30672
30673
30674
30675
30676
30677
30678
30679
30680
30681
30682
30683
30684
30685
30686
30687
30688
30689
30690
30691
30692
30693
30694
30695
30696
30697
30698
30699
30700
30701
30702
30703
30704
30705
30706
30707
30708
30709
30710
30711
30712
30713
30714
30715
30716
30717
30718
30719
30720
30721
30722
30723
30724
30725
30726
30727
30728
30729
30730
30731
30732
30733
30734
30735
30736
30737
30738
30739
30740
30741
30742
30743
30744
30745
30746
30747
30748
30749
30750
30751
30752
30753
30754
30755
30756
30757
30758
30759
30760
30761
30762
30763
30764
30765
30766
30767
30768
30769
30770
30771
30772
30773
30774
30775
30776
30777
30778
30779
30780
30781
30782
30783
30784
30785
30786
30787
30788
30789
30790
30791
30792
30793
30794
30795
30796
30797
30798
30799
30800
30801
30802
30803
30804
30805
30806
30807
30808
30809
30810
30811
30812
30813
30814
30815
30816
30817
30818
30819
30820
30821
30822
30823
30824
30825
30826
30827
30828
30829
30830
30831
30832
30833
30834
30835
30836
30837
30838
30839
30840
30841
30842
30843
30844
30845
30846
30847
30848
30849
30850
30851
30852
30853
30854
30855
30856
30857
30858
30859
30860
30861
30862
30863
30864
30865
30866
30867
30868
30869
30870
30871
30872
30873
30874
30875
30876
30877
30878
30879
30880
30881
30882
30883
30884
30885
30886
30887
30888
30889
30890
30891
30892
30893
30894
30895
30896
30897
30898
30899
30900
30901
30902
30903
30904
30905
30906
30907
30908
30909
30910
30911
30912
30913
30914
30915
30916
30917
30918
30919
30920
30921
30922
30923
30924
30925
30926
30927
30928
30929
30930
30931
30932
30933
30934
30935
30936
30937
30938
30939
30940
30941
30942
30943
30944
30945
30946
30947
30948
30949
30950
30951
30952
30953
30954
30955
30956
30957
30958
30959
30960
30961
30962
30963
30964
30965
30966
30967
30968
30969
30970
30971
30972
30973
30974
30975
30976
30977
30978
30979
30980
30981
30982
30983
30984
30985
30986
30987
30988
30989
30990
30991
30992
30993
30994
30995
30996
30997
30998
30999
301000
301001
301002
301003
301004
301005
301006
301007
301008
301009
301010
301011
301012
301013
301014
301015
301016
301017
301018
301019
301020
301021
301022
301023
301024
301025
301026
301027
301028
301029
301030
301031
301032
301033
301034
301035
301036
301037
301038
301039
301040
301041
301042
301043
301044
301045
301046
301047
301048
301049
301050
301051
301052
301053
301054
301055
301056
301057
301058
301059
301060
301061
301062
301063
301064
301065
301066
301067
301068
301069
301070
301071
301072
301073
301074
301075
301076
301077
301078
301079
301080
301081
301082
301083
301084
301085
301086
301087
301088
301089
301090
301091
301092
301093
301094
301095
301096
301097
301098
301099
301100
301101
301102
301103
301104
301105
301106
301107
301108
301109
301110
301111
301112
301113
301114
301115
301116
301117
301118
301119
301120
301121
301122
301123
301124
301125
301126
301127
301128
301129
301130
301131
301132
301133
301134
301135
301136
301137
301138
301139
301140
301141
301142
301143
301144
301145
301146
301147
301148
301149
301150
301151
301152
301153
301154
301155
301156
301157
301158
301159
301160
301161
301162
301163
301164
301165
301166
301167
301168
301169
301170
301171
301172
301173
301174
301175
301176
301177
301178
301179
301180
301181
301182
301183
301184
301185
301186
301187
301188
301189
301190
301191
301192
301193
301194
301195
301196
301197
301198
301199
301200
301201
301202
301203
301204
301205
301206
301207
301208
301209
301210
301211
301212
301213
301214
301215
301216
301217
301218
301219
301220
301221
301222
301223
301224
301225
301226
301227
301228
301229
301230
301231
301232
301233
301234
301235
301236
301237
301238
301239
301240
301241
301242
301243
301244
301245
301246
301247
301248
301249
301250
301251
301252
301253
301254
301255
301256
301257
301258
301259
301260
301261
301262
301263
301264
301265
301266
301267
301268
301269
301270
301271
301272
301273
301274
301275
301276
301277
301278
301279
301280
301281
301282
301283
301284
301285
301286
301287
301288
301289
301290
301291
301292
301293
301294
301295
301296
301297
301298
301299
301300
301301
301302
301303
301304
301305
301306
301307
301308
301309
301310
301311
301312
301313
301314
301315
301316
301317
301318
301319
301320
301321
301322
301323
301324
301325
301326
301327
301328
301329
301330
301331
301332
301333
301334
301335
301336
301337
301338
301339
301340
301341
301342
301343
301344
301345
301346
301347
301348
301349
301350
301351
301352
301353
301354
301355
301356
301357
30

11. The method of Claim 10, wherein a color of said graphical figures denotes locations that are located at the same site.

12. The method of Claim 10, wherein a brightness of said 5 graphical figures further denotes a quality of match of the corresponding location.

13. The method of Claim 10, wherein a size of said graphical figures denotes a popularity of the corresponding location.

14. The method of Claim 10, wherein said graphical figures comprise:

 a central circular figure corresponding to a best match from said set of locations; and

 a plurality of semi-circular arcs each corresponding to one of the remainder of said locations, each arc having a thickness and an angular length determined at said generating, said thickness and an angular length of said arc corresponding to a quality of match of said corresponding one of said location.

15. The method of Claim 10, further comprising:

receiving a user selection of one of said graphical figures made by a user moving a graphical pointer over said one of said graphical figures; and

5 in response to said receiving, generating a text box
containing a description of the corresponding location near said
graphical figure.

16. The method of Claim 1, wherein said generating generates a hierarchical view wherein graphical figures corresponding to a set of categories is generated on said graphical display, and wherein said interpretation is performed in conformity with a selected state of said hierarchical view, and wherein said generating generates a display of said location information in conformity with said selected state.

17. The method of Claim 16, wherein said generating further generates a display of said location information in conformity with said match quality information.

18. The method of Claim 16, wherein said generating generates a hierarchical view comprising graphical figures each corresponding to one of said set of categories, and wherein a user selects said selected state by selecting one of said 5 category graphical figures.

19. The method of Claim 18, wherein said generating generates a graphical display having graphical figures corresponding to sub-categories within said categories and wherein said hierarchical view comprises sub-category graphical figures each corresponding to one of said set of sub-categories drawn within said category graphical figures whereby said user may select a level of said selected state by selecting one of said sub-category graphical figures or one of said category graphical figures.

20. The method of Claim 18, wherein said generating further generates a graphical mosaic comprising mosaic graphical figures each corresponding to a location, wherein characteristics of said mosaic graphical figures are adjusted in conformity with 20 said interpretation of said match quality information, and wherein said mosaic graphical figures correspond to one of a set of locations determined in conformity with said selected state of said hierarchical view.

21. The method of Claim 20, wherein said graphical mosaic comprises a radial view wherein a radial position each of said mosaic graphical figures increases with a decreasing match quality.

5

22. A graphical user interface method for displaying search results downloaded from a search server, said search results including a set of location information and match quality information, said method including:

generating a list of said location information and a control interface located at each list item for manipulating said list item on a graphical display;

receiving a user input at a particular control interface for manipulating an associated list item; and

in response to said receiving, modifying a display of said particular list item in conformity with said user input without generating another request to said search server.

23. The graphical user interface method of Claim 22, wherein
20 said list is a collapsible list, wherein display of each list item is representable by a verbose state and a sparse state, and wherein said modifying changes a state of said display of said list item in response to said receiving.

24. A graphical user interface method for displaying Internet search results downloaded from a search server, said search results including a set of location information and match quality information, said method including generating a 5 graphical mosaic comprising graphical figures each corresponding to a location, and wherein characteristics of said graphical figures are generated in conformity with said interpretation of said match quality information.

4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

25. The graphical user interface method of Claim 24, wherein said graphical mosaic comprises a radial view wherein a radial position of said graphical figures increases with a decreasing match quality.

26. The graphical user interface method of Claim 24, wherein a color of said graphical figures denotes locations that are located at the same site.

27. The graphical user interface method of Claim 24, wherein a 20 brightness of said graphical figures further denotes a quality of match of the corresponding location.

28. The graphical user interface method of Claim 24, wherein a size of said graphical figures denotes a popularity of the corresponding location.

5 29. The graphical user interface method of Claim 24, wherein said graphical figures comprise:

 a central circular figure corresponding to a best match from said set of locations; and

 a plurality of semi-circular arcs each corresponding to one of the remainder of said locations, each arc having a thickness and an angular length determined at said generating, said thickness and an angular length of said arc corresponding to a quality of match of said corresponding one of said locations.

15 30. The graphical user interface method of Claim 24, further comprising:

 receiving a user selection of one of said graphical figures made by a user moving a graphical pointer over said one of said graphical figures; and

20 in response to said receiving, generating a text box containing a description of the location corresponding to said graphical figure.

31. The graphical user interface method of Claim 24, further comprising generating a category selection list, and wherein said graphical mosaic is generated from a set of locations corresponding to a selected category of said category selection list.

32. The graphical user interface method of Claim 24, further comprising generating a hierarchical view wherein graphical figures corresponding to a set of categories is generated within a graphical display, and wherein said hierarchical view is adapted for user input for selecting a state of said hierarchical view, and wherein said graphical mosaic is generated from a set of locations corresponding to a selected state of said hierarchical view.

33. A graphical user interface method comprising:

generating a hierarchical view wherein graphical figures corresponding to a set of categories is generated within a first area of a graphical display, and wherein said hierarchical view is adapted for user input for selecting a state of said hierarchical view;

interpreting a set of search results in conformity with a selected state of said hierarchical view; and

generating a search result display from said interpreted search results in a second area of said graphical display.

34. The graphical user interface method of Claim 33, wherein said generating generates a hierarchical view comprising category graphical figures each corresponding to one of said set of categories, and wherein a user selects said selected state by selecting one of said category graphical figures.

35. The graphical user interface method of Claim 33, wherein
said generating generates a graphical display having graphical
elements corresponding to sub-categories within said categories
and wherein said hierarchical view comprises sub-category
5 graphical figures drawn within said category graphical figures,
each corresponding to one of said set of sub-categories whereby
said user may select a level of said selected state by selecting
one of said sub-category graphical figures or one of said
category graphical figures.

36. A computer network comprising:

 a search server for providing search database information
 in response to search requests;

 a client computer system coupled to said search server via .

5 said network, said computer system comprising a memory for
 storing program instructions and data coupled to a processor for
 executing said program instructions, and wherein said program
 instructions comprise:

 program instructions for requesting and presenting a
 result of said search request;

 transmitting information specifying said search
 request to said search server;

 downloading binary search result data from said search
 server, said search request result comprising location
 information and match quality information;

 interpreting said location information and match
 quality information for display of said location information on
 a graphical display of said client computer, whereby said
 location information is formatted for presentation on said
 graphical display by said program; and

20 generating said graphical display in conformity a result of
 said interpreting.

37. The computer network of Claim 36, wherein said program instructions are embodied in a Java applet for execution within a browser program executing within said client computer, and wherein said interpreting is performed by said Java applet on 5 said binary search result data and wherein said Java applet generates a graphical display in conformity therewith.

38. The computer network of Claim 36, wherein said client computer is a personal digital assistant (PDA), and wherein said program instructions comprise a dedicated application executing within said PDA and wherein said interpreting is performed by said dedicated application on said binary search result data and wherein said dedicated application generates a graphical display in conformity with a result of said interpreting.

39. The computer network of Claim 36 wherein said client computer is a personal digital assistant (PDA), further comprising server program instructions within a memory of said search server for execution by a processor within said search server, and wherein said program instructions within said client computer comprise a dedicated application executing within said PDA and wherein said interpreting is performed by said dedicated application on said binary search result data and wherein said dedicated application generates requests to said search server to provide data for generating a graphical display in conformity with a result of said interpreting and wherein said server program instructions supply graphical information in response to said requests.

4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
279
280
281
282
283
284
285
286
287
288
289
289
290
291
292
293
294
295
296
297
298
299
299
300
301
302
303
304
305
306
307
308
309
309
310
311
312
313
314
315
316
317
318
319
319
320
321
322
323
324
325
326
327
328
329
329
330
331
332
333
334
335
336
337
338
339
339
340
341
342
343
344
345
346
347
348
349
349
350
351
352
353
354
355
356
357
358
359
359
360
361
362
363
364
365
366
367
368
369
369
370
371
372
373
374
375
376
377
378
379
379
380
381
382
383
384
385
386
387
388
389
389
390
391
392
393
394
395
396
397
398
399
399
400
401
402
403
404
405
406
407
408
409
409
410
411
412
413
414
415
416
417
418
419
419
420
421
422
423
424
425
426
427
428
429
429
430
431
432
433
434
435
436
437
438
439
439
440
441
442
443
444
445
446
447
448
449
449
450
451
452
453
454
455
456
457
458
459
459
460
461
462
463
464
465
466
467
468
469
469
470
471
472
473
474
475
476
477
478
479
479
480
481
482
483
484
485
486
487
488
489
489
490
491
492
493
494
495
496
497
498
499
499
500
501
502
503
504
505
506
507
508
509
509
510
511
512
513
514
515
516
517
518
519
519
520
521
522
523
524
525
526
527
528
529
529
530
531
532
533
534
535
536
537
538
539
539
540
541
542
543
544
545
546
547
548
549
549
550
551
552
553
554
555
556
557
558
559
559
560
561
562
563
564
565
566
567
568
569
569
570
571
572
573
574
575
576
577
578
579
579
580
581
582
583
584
585
586
587
588
589
589
590
591
592
593
594
595
596
597
598
599
599
600
601
602
603
604
605
606
607
608
609
609
610
611
612
613
614
615
616
617
618
619
619
620
621
622
623
624
625
626
627
628
629
629
630
631
632
633
634
635
636
637
638
639
639
640
641
642
643
644
645
646
647
648
649
649
650
651
652
653
654
655
656
657
658
659
659
660
661
662
663
664
665
666
667
668
669
669
670
671
672
673
674
675
676
677
678
679
679
680
681
682
683
684
685
686
687
688
689
689
690
691
692
693
694
695
696
697
698
698
699
699
700
701
702
703
704
705
706
707
708
709
709
710
711
712
713
714
715
716
717
718
719
719
720
721
722
723
724
725
726
727
728
729
729
730
731
732
733
734
735
736
737
738
739
739
740
741
742
743
744
745
746
747
748
749
749
750
751
752
753
754
755
756
757
758
759
759
760
761
762
763
764
765
766
767
768
769
769
770
771
772
773
774
775
776
777
778
779
779
780
781
782
783
784
785
786
787
788
789
789
790
791
792
793
794
795
796
797
797
798
799
799
800
801
802
803
804
805
806
807
808
809
809
810
811
812
813
814
815
816
817
818
819
819
820
821
822
823
824
825
826
827
828
829
829
830
831
832
833
834
835
836
837
838
839
839
840
841
842
843
844
845
846
847
848
849
849
850
851
852
853
854
855
856
857
858
859
859
860
861
862
863
864
865
866
867
868
869
869
870
871
872
873
874
875
876
877
878
879
879
880
881
882
883
884
885
886
887
888
889
889
890
891
892
893
894
895
896
897
897
898
899
899
900
901
902
903
904
905
906
907
908
909
909
910
911
912
913
914
915
916
917
918
919
919
920
921
922
923
924
925
926
927
928
929
929
930
931
932
933
934
935
936
937
938
939
939
940
941
942
943
944
945
946
947
948
949
949
950
951
952
953
954
955
956
957
958
959
959
960
961
962
963
964
965
966
967
968
969
969
970
971
972
973
974
975
976
977
978
979
979
980
981
982
983
984
985
986
987
988
989
989
990
991
992
993
994
995
995
996
997
997
998
999
999
1000

40. A computer system comprising a memory for storing program instructions and data, a processor coupled to said memory for executing said program instructions, a graphical display device coupled to said processor for displaying a graphical user interface (GUI) and an input device coupled to said processor for providing user input, wherein said program instructions comprise program instructions for:

receiving search results including a set of location information and match quality information, and

generating a graphical mosaic comprising graphical figures each corresponding to a location, and wherein characteristics of said graphical figures are generated in conformity with said interpretation of said match quality information.

41. The computer system of Claim 40, wherein said program instructions generate a graphical mosaic comprising a radial view wherein a radial position of said graphical figures increases with a decreasing match quality.

20 42. The computer system of Claim 41, wherein said program instructions set a color of said graphical figures denoting locations that are located at the same site.

43. The computer system of Claim 41, wherein said program instructions set a brightness of said graphical figures further denoting a quality of match of the corresponding location.

5 44. The computer system of Claim 41, wherein said program instructions set a size of said graphical figures denoting a popularity of the corresponding location.

45. The computer system of Claim 41, wherein said program instructions generate a graphical mosaic comprising a central circular figure corresponding to a best match from said set of locations, and a plurality of semi-circular arcs each corresponding to one of the remainder of said locations, each arc having a thickness and an angular length determined at said generating, said thickness and an angular length of said arc corresponding to a quality of match of said corresponding one of said locations.

46. The computer system of Claim 40, wherein said program instructions further comprise program instructions for:

receiving a user selection of one of said graphical figures made by a user moving a graphical pointer over said one of said 5 graphical figures; and

in response to said receiving, generating a text box containing a description of the location corresponding to said graphical figure.

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

47. The computer system of Claim 40, wherein said program instructions further comprise program instructions for:

generating a list of categories; and
determining that a user has selected a category, and
wherein said graphical mosaic is generated from a set of
locations corresponding to said selected category.

48. A computer system comprising a memory for storing program instructions and data, a processor coupled to said memory for executing said program instructions, a graphical display device coupled to said processor for displaying a graphical user interface (GUI) and an input device coupled to said processor for providing user input, wherein said program instructions comprise program instructions for:

receiving search results including a set of location information;

generating a hierarchical view wherein graphical figures corresponding to a set of categories is generated within a first area of a graphical display, and wherein said hierarchical view is adapted for user input for selecting a state of said hierarchical view;

interpreting a set of search results in conformity with a selected state of said hierarchical view; and

generating a search result display from said interpreted search results in a second area of said graphical display.

49. The computer system of Claim 48 wherein said program instructions for generating generate a hierarchical view comprising category graphical figures each corresponding to one of said set of categories, and wherein a user selects said selected state by selecting one of said category graphical figures.

50. The computer system of Claim 49, wherein said program instructions for generating generate a graphical display having graphical elements corresponding to sub-categories within said categories and wherein said hierarchical view comprises sub-category graphical figures drawn within said category graphical figures, each corresponding to one of said set of sub-categories whereby said user may select a level of said selected state by selecting one of said sub-category graphical figures or one of said category graphical figures.

51. The computer system of Claim 48, wherein said program instructions for receiving further receive match quality information corresponding to locations within said location information, and wherein said program instructions for generating further generate a graphical mosaic comprising graphical figures each corresponding to a location, and wherein characteristics of said graphical figures are generated in conformity with said interpretation of said match quality information, and wherein said graphical figures are generated from a set of locations corresponding to a selected state of said hierarchical view.

52. A computer program product comprising signal-bearing media encoding program instructions for execution within a general-purpose computer coupled to a search server via a network, wherein said program instructions comprise program instructions

5 for:

instantiating a program for requesting a search and presenting a result of said search request;

transmitting information specifying said search request to said search server;

downloading binary search result data from said search server, said search request result comprising location information and match quality information;

interpreting said location information and match quality information for display of said location information on a graphical display of said computer, whereby said location information is formatted for presentation on said graphical display by said program; and

generating said graphical display in conformity with a result of said interpreting.

53. The computer program product of Claim 52, wherein said program comprises a Java applet for execution within a browser program executing within said computer, and wherein said interpreting is performed by said Java applet on said binary 5 search result data and wherein said Java applet generates a graphical display in conformity therewith.

40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
54. The computer program product of Claim 52, wherein said computer is a personal digital assistant (PDA), and wherein said program instructions comprise a dedicated application executing within said PDA and wherein said interpreting is performed by said dedicated application on said binary search result data and wherein said dedicated application generates a graphical display in conformity with a result of said interpreting.

55. A computer program product comprising signal-bearing media encoding program instructions for execution within a computer system, wherein said program instructions comprise program instructions for:

5 receiving search results including a set of location information and match quality information, and
generating a graphical mosaic comprising graphical figures each corresponding to a location, and wherein characteristics of said graphical figures are generated in conformity with said interpretation of said match quality information.

56. The computer program product of Claim 55, wherein said program instructions for generating generate a graphical mosaic comprising a radial view wherein a radial position of said graphical figures increases with a decreasing match quality.

57. The computer program product of Claim 56, wherein said program instructions set a color of said graphical figures denoting locations that are located at the same site.

20

58. The computer program product of Claim 56, wherein said program instructions set a brightness of said graphical figures further denoting a quality of match of the corresponding location.

59. The computer program product of Claim 56, wherein said program instructions set a size of said graphical figures denoting a popularity of the corresponding location.

5

60. The computer program product of Claim 56, wherein said program instructions generate a graphical mosaic comprising a central circular figure corresponding to a best match from said set of locations, and a plurality of semi-circular arcs each corresponding to one of the remainder of said locations, each arc having a thickness and an angular length determined at said generating, said thickness and an angular length of said arc corresponding to a quality of match of said corresponding one of said locations.

61. The computer program product of Claim 56 wherein said program instructions further comprise program instructions for: receiving a user selection of one of said graphical figures made by a user moving a graphical pointer over said one of said graphical figures; and

in response to said receiving, generating a text box containing a description of the location corresponding to said graphical figure.

62. The computer program product of Claim 56, wherein said program instructions further comprise program instructions for:
generating a list of categories; and
determining that a user has selected a category, and
5 wherein said graphical mosaic is generated from a set of locations corresponding to said selected category.

卷之三

63. A computer program product comprising signal-bearing media encoding program instructions for execution within a general-purpose computer system, wherein said program instructions comprise program instructions for:

5 receiving search results including a set of location information;

generating a hierarchical view wherein graphical figures corresponding to a set of categories is generated within a first area of a graphical display, and wherein said hierarchical view is adapted for user input for selecting a state of said hierarchical view;

interpreting a set of search results in conformity with a selected state of said hierarchical view; and

generating a search result display from said interpreted search results in a second area of said graphical display.

64. The computer program product of Claim 63, wherein said program instructions for generating generate a hierarchical view comprising category graphical figures each corresponding to one 20 of said set of categories, and wherein a user selects said selected state by selecting one of said category graphical figures.

65. The computer program product of Claim 64, wherein said program instructions for generating generate a graphical display having graphical elements corresponding to sub-categories within said categories and wherein said hierarchical view comprises 5 sub-category graphical figures drawn within said category graphical figures, each corresponding to one of said set of sub-categories whereby said user may select a level of said selected state by selecting one of said sub-category graphical figures or one of said category graphical figures.

66. The computer system of Claim 63, wherein said program instructions for receiving further receive match quality information corresponding to locations within said location information, and wherein said program instructions for generating further generate a graphical mosaic comprising graphical figures each corresponding to a location, and wherein characteristics of said graphical figures are generated in conformity with said interpretation of said match quality information, and wherein said graphical figures are generated 20 from a set of locations corresponding to a selected state of said hierarchical view.